A study of the learning effectiveness on 4th grade pupils among multimedia expressions in Vietnam
H. Phan Thi Thu*, L. Shi-Jer
Npust, Viet Nam

This research concerns about the resulting effect of multimedia learning on learner and instructors is a meaningful learning experience in an educational environment. Online materials with multimedia elements are widely used at all levels of education and learning exciting and student-centered. Cognitive theory of multimedia learning is the integration of multimedia in a systematic of combining verbal and non-verbal communication to minimize cognitive overload of learner’s memory utilizing learner’s multiple intelligences and using prior knowledge of multimedia contents and content information to construct and refine knowledge.

The research according to Mayer (2008) the design principles of multimedia materials based on cognitive theory of multimedia learning. Classify students into different levels of attention abilities by adopting the test of multidimensional attention. Discuss the learning effectiveness in every combination. Use the basic principle with the result of the research to design and choose multimedia materials.

3x2 two factor quasi-experimental design is used in this study, includes two materials as well. The participants are 105 students in grade 3 of elementary school. The independent variables of two experiments are the modes of multimedia presentation (on-screen text of animation, onscreen text of static graphs, and the text closes to the static graphs,) and categories of the impact of child’s attention (high level and general level attention abilities.) Provide a test of learning effectiveness with ideas of remember, understand, and apply.) Proceed an experiment teaching and analyze the files. Here are the findings of this research below:

I. In this research we found, there is no interaction of learning effectiveness in multimedia presentation and child’s attention ability. According to the result, no matter how we try in different ways, there is even no interaction of learning effectiveness.

II. Another finding, there is an obvious effect in multimedia presentation to learning effectiveness. The presentation of static graph is better than animation and we also know the text closes to the static graphs is much better than on-screen text of static graphs. Besides, the effect of learning in different kind of presentation is restricted with the memories and understandings of cognition. There is no difference in this part.

III. Students of high level attention ability have obvious effects. Learning effectiveness of those students is better than others.

With this achievement, applying in teaching in primary school in Vietnam will get higher results more than the traditional method used to teach.

References


Keywords: Multimedia learning, Animation, Static graphs, Child’s learning ability, primary